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ABSTRACT

Several external and internal factors combine to hinder optimal communication in "Competency," the language of behavior modification. As a language, Competency a) is spoken with varying degrees of fluency and facility, b) is difficult to translate into English because the common vocabulary is used descriptively in English while it is used functionally in Competency, and c) is dynamic in its potential as a precision instrument for communication. Communication in Competency is affected by a) entropy, the freedom of the communicator with regard to word selection; b) redundancy, that part of a message which is unnecessary for understanding; c) noise, or message distortion; and d) channel capacity, or the vocabulary of the listener. Competency is presently used inter- and intra-personally without consistency of function. Six ordered functions of Competency are a) Binary, used to separate proponents of behavior modification from nonproponents; b) Communicative, used to enhance reliability in describing human behavior phenomena; c) Suggestive, used to encourage major and minor instructional developments; d) Investigative, used to provide a common language for researchers; e) Generative, used to advance thought; and f) Valuative, used to assess competency in personnel. The language of Competency must be developed, refined, and studied carefully by those who use it. (HMD)

Clearinghouse

COMPETENCY: THE LANGUAGE OF THE BEHAVIORAL OBJECTIVES MOVEMENT

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A pessimist need not search far to find oracles willing to conduct final rites over the behavioral objectives movement and its progeny: performance contracting, accountability systems, competency-based teacher education (CBTE), and performance-based teacher education. The movement within teacher education is not in immediate danger of extinction, but it could loose sound philosophical support for orderly and humanistic growth. The oracles, humanistic educational philosophers and disillusioned teacher educators, have rejected what they have seen or experienced and are firing warning shots over the education professions. This article suggests a basis for re-evaluating the behavioral objectives movement; and evaluation that will be more directive than destructive, more sustained than staccato, and more humanistic than Scholasitc.

Signs of Disillusionment

Performance contracts in the new education industries have not met the expectations of consumers. Problems of measurement and evaluation, combined with formidable independent variables of low pupil motivation and

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cultural expectations, greeted the education contractors with poor odds for success. The Office of Economic Opportunity's funding of performance contracts has not produced the anticipated results. Local taxpapers, hoping for a more efficient use of their taxes, have performance contracting failures as another basis for distrusting their community's education leadership.

Accountability and performance-based teacher education have been challenged seriously by educational philosophers.[1] Slogans of human dignity, interpersonal sensitivity, and self-actualization have been offered in contrast to the depersonalization of human engineering and management technology. A recent issue of the Middle Atlartic States Philosophy of Education Society Newsletter (January, 1973) raised storm warnings in an effort to keep teacher education from being lead beyond freedom and dignity.

Teacher educators associated with the day-to-day process of professional preparation have only recently finished "Round 1" with state departments of education and mandates for behavioral objectives and competency-based programs. Thousands of 3x5 index cards have been faithfully inscribed with observable behaviors; state offices are inundated with competency studies. Having temporarily appeased the bureaucracy and accountability-counscious legislators, some teacher educators quickly returned to former practices of three 50-minute exposures per week for nurturing future educators. Other teacher educators are still trying to give CBTE a chance. They reveal battle scars and nagging suspicions of failure to those of like commitment, extol virtues of CBTE before all others.

Perhaps the most discouraging phenomena for CBTE enthusiasts are their own conversations on issues and the state of the art. Quickly, feelings of déjà vu emerge among their ranks as the same problems, issues, and

sources of impasse surface again and again. Few group discussions pass without a teacher educator confessing before his peers that he does not know what a competent teacher is. The confession receives absolution from most until someone hurls the challenge: "If we're in the business of preparing teachers and don't know who a competent teacher is, then who does"? Shortly, the research oriented member laments the lack of experimental research on the teacher and learning.

If the definition problem doesn't scuttle the spirits of CBTE practitioners, then the "how-do-we-determine-who-is-competent" impasse creates a major distraction. As discussion continues, the "when-do-you-stop-further-specification-of-competencies" question is raised and the University of Massachusetts "Model Elementary Teacher Education Program" is cited as the epitomy of detailing teacher competencies. Concern is then expressed for the affective development of the teacher, including attitudes, values, and beliefs, the point at which CBTE may be most vulnerable to criticism. Finally with a coup de grace, the CBTE program administrator cites the burden of awarding competency-based academic credits, credentials, and certification.

Source of Disillusionment

What's wrong with the behavioral objectives movement, particularly CBTE? Is it impossible to cite the competencies of a model teacher? Are certain attributes forever beyond observation and measurement? Is the precise and prolific specification of competencies busy-work? Is there a way to assure quality in teacher preparation? These questions are posed by humanistic philosophers and disillusioned teacher educators alike but they might not be the real issue facing CBTE. It is possible that the questions are symptoms of a major communication failure.

Social psychological communication theory offers possible explanations for communication failure when discussing CBTE and other facets of the behavioral objectives movement. George N. Gordon, a communications theorist, introduced the term "psychologics" to identify external and internal factors determining conditions of perception and communication failure. [2] The external factors included air temperature, outside noise, static, and phrasing. The internal factors included social, cultural, and educational development; motivation for understanding or misunderstanding; and, the communicants' degrees of receptivity to vocabulary symbols, memories of past activities, antagonisms, frustrations, and desires. [3]

External Factor. The phrasing of language in CBTE discussions is an external psychologic factor. Being external, it is amenable and deserving of attention. If productive discussion of CBTE is to develop further, then communication failure due to the external factor of language phasing must be controlled. A better understanding of the language peculiar to the behavioral objectives movement should provide a basis for re-evaluating it.

Internal Factor. It is reasonable to expect a conversation between an existential philosopher and a teacher educator to result in opposite conclusions based upon inaccurate perceptions (internal psychologic factors) rather than substantive issues, The teacher educator, willing to seize almost anything that might increase effectiveness, and the existential philosopher, trained for careful introspection, might use the same words but because of internal bias be motivated toward diverse understandings. Even among CBTE enthusiasts, internal psychologic

factors such as memories of past experiences, antagonisms, and frustrations could produce conversations with apparent convergence, yet because of different internal perceptions, the conversations are actually divergent.

For this article, the language of the behavioral objectives movement will be referred to as "Competency," spelled with a capital "C". (The word "competency" with a lower case "c" refers to a category or level of ability, whether psychomotor, cognitive, or affective.

I. External Factors in Communication

Competency as a Language

Competency (with a capital "C") is unusual because it is primarily functional, whereas English is primarily descriptive. One uses Competency to perform certain cognitive operations and uses English to describe these operations. The distinction parallels the difference between symbolic logic and prose. For example, Competency is a neutral language without aesthetic qualities and it functions in the limited linguistic pattern of subject, action verb, and object. Words are the same in English and Competency, but in the latter language there are fewer acceptable words and their order in a sentence is highly structured. If a distinction is made between Competency and English, vis-a-vis functional and descriptive, then there may be at least three important implications for this functional language: variations in fluency, difficulty in translation, and dynamic in potential.

Variations in Fluency. First, Competency is a new language in general pedagogical discussions and consequently is used with various levels of fluency. The essential concept of behavioral objectives may be traced to Progressive Education and has long been part of the experimental researcher's hypotheses. Nevertheless, Competency is new to many persons in the broader

arena of pedagogy and teacher education, and individual facility varies considerably.

Difficulty in Translation. The second implication is that Competency and English are not now readily translatable from one to the other. The problem of translation is similar to that of placing prose on propositions stated in symbolic logic. To achieve aesthetically pleasing and persuasive prose, transliteration of a symbolic proposition is necessary and sacrifices logical precision. A statement written in Competency is terse, leaving little to the imagination or for individual interpretation. Once a Competency statement is re-written in evocative English prose, it may inspire but its meaning varies considerably from person to person.

Dynamic in Potential. The third implication is that Competency introduces a new potential for pedagogical discussions. Being functional it is precise and has the ability to sharpen old concepts and to generate new ones. It is essentially a tool for accurate communication and generation of ideas.

The three implications of Competency as a language (variations in fluency, difficulty in translation, and dynamic in potential) illustrate why communication failure in CBTE discussions is almost inevitable. Anyone who has experienced serious conversation in a second language can testify to the frustration of expressing accurately a complex thought, especially when the thought is new. The frustration and impatience is compounded by failure to recognize that a "second language" (i.e. Competency) is being used and that one's facility in it is not on a par with the native language. The words in Competency are not new and create a false sense of ease in the conversation or discontinuous thinking.

Movement from English to Competency and from Competency back to English is superficially simple because of the shared vocabulary, consequently recognition of the descriptive versus functional characteristics is important and suggests extra caution in translation efforts. Finally, even a brief courtship with the language's dynamic potential provokes images of human engineering and questions the validity of one's present practices in teacher education. If so, defensive reaction sets in and many internal psychologic factors in communication failure are aroused.

Viability of Competency for Accurate Communication

It is now appropriate to turn to several communication theories to test the viability of Competency as an accurate functional language. Three theories have been cursorily explored for their contributions: mathematical, social psychological, and linguistic.*

Mathematical and Social Psychological Theories. When dealing with external language factors, mathematical and social psychological theories converge in several useful concepts: entropy, redundance, noise, and channel. In communication theory, entropy is the freedom the sender of a message has in selecting words. As in thermodynamics, entropy or size of one's vocabulary tends to increase with the passing of time. Redundancy in a message is that part which could be lost without sacrificing meaning or understanding. For example, in a parent-to-young child monolog, the parent speaks with a limited vocabulary, frequently restating an idea with

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*The author is indebted to the discussions of communication theories presented by Warren Weaver, Robert F. Bales, A. Paul Hare, Wilbur Schramm, Noam Chomsky, Josiah Macy, Jr., Lee S. Christy, and R. Duncan Luce in Communication and Culture: Alfred G. Smith, Readings in the Codes of Human Interaction. New York: Hall, Rinehart and Winston, 1966.

only minor changes in wording. If the young child understands only one of the several similar statements, the idea is communicated without lost meaning.

The relation between entropy and redundancy is simple. The amount of entropy plus the amount of redundancy equals 1. This means that a message with high entropy will have low redundancy, and one with low entropy will have high redundancy. Also, since entropy tends to increase (that is, there is an increasing vocabulary), redundancy tends to decrease with a risk of lost meaning. Returning to the parent-to-young child illustration, if the parent were not careful about word choice, the statement would be complex and without similar restatements. If the child misunderstands the single complex statement, then there is no second opportunity to understand the idea being offered by the parent.

The remaining two terms, noise and channel, are also related. Noise is the distortion of a message and the capacity of the communication channel (always equal to or less than the message's entropy) determines the noise level. For example, if the channel has limited capacity to carry messages, and the messages have considerable entropy (vocabulary), then the messages will be distorted or noisy. In the parent-to-young child illustration, the child's listening vocabulty is the channel capacity. When his listening vocabulary is exceeded by his parent's speaking vocabulary, the meaning becomes distorted and there is noise.

So far, the following propositions have been introduced:

1. Entropy plus redundancy is 1.
2. Entropy minus channel capacity is noise.

It should be obvious that when the channel capacity (the child's vocabulary) is equal to the entropy (the parent's vocabulary) there is no noise (distorted meaning), a condition which is difficult if not

impossible to achieve. Noise can be lowered if entropy is also lowered and the channel capacity increased. If the channel capacity (child's vocabulary) cannot be altered easily, then the only way to reduce noise is to limit the entropy (parent's vocabulary).

By combining propositions 1 and 2, it should be evident that the effective way to lower entropy and noise is to increase redundancy since it is almost impossible to perceive the extent of or alter the listener's vocabulary. That is, more redundancy in information, will result in less entropy and consequently less noise due to the channel capacity. When noise is reduced by increasing redundancy then the accuracy of communication is increased. If the parent wants to be understood by the young child, then the parent's vocabulary must be limited and the statement must contain redundant terms or phrases.

Proponents of CBTE take heed! When employing Competency, don't despair over its redundancy. Redundancy (fragmented statements of teacher behaviors) is the most flagrant characteristic of Competency, is frequently the target of ridicule, and just may be its major asset.

Linguistic Theories. Linguistic theories also deal with external language factors in communication. Sentence structure and kernel sentence are linguistic terms which serve to test the viability of Competency. Competency uses a small number of basic sentence structures. Frequently the sentence structure remains constant and only the words are changed.

The simplicity and constancy of Competency sentence structure resemble the transformational grammarian's kernel sentence. Even the few longer phrases in Competency may be reduced by transformational analysis to a small and easily managed number of kernel sentences. These kernel sentences are subject to the restrictions of specific laws and content analysis.

One cannot help but associate linguistic theory with the above two propositions relating entropy, redundancy, channel, and noise. The rubrics of transformational grammar and linguistics have the net effects of reducing entropy. Freedom of word choice is limited by laws of grammar, so when grammarical rigour or transformational analysis are employed in Competency, communication noise is reduced even further. This association of linguistic theory and the two propositions provides further illustration of the functional nature of Competency. Surprisingly, it is hidden no more deeply than in the simple subject-behavioral verb-object structure of the behavioral objectives.

Viability Upheld. The purpose of this brief excursion into communication theory was to test the viability of Competency for accurate communication. Since a functional language must perform cognitive operations with precision, failure in communication due to imprecision in that language would be intolerable. Competency's redundancy and structural simplicity are assets which create precision and serve to reduce if not eliminate failures in communication.

The external psychologic factor of language phasing in communication failure (phrasing of Competency) has been considered. Now, strategies must be considered which will help control for internal psychologic factors such as educational development, motivations, memories, and desires. In the preceding analysis Competency was supported as a functional language; the following analysis of Competency's functions is offered as a step toward understanding potentially destructive internal psychologic factors. Once the functions are analyzed, then communication failures due to external and internal psychologic factors can be anticipated and possibly eliminated.

II. Internal Factors in Communication

Functions of Competency

After participating for several years in the behavioral objectives movement and particularly the efforts to construct a CBTE program, one sees Competency used in various ways without apparent inter- or intra-personal consistency. These uses are the functions of Competency and teacher educators must achieve inter- and intra-personal consistency of use for the functions. Following are descriptions of six functions for consideration.

1. Binary Function. The binary function of Competency is its ability to turn some people "on" and others "off". Nothing more sophisticated is intended by this function than that of separating those persons who find in the behavioral objectives movement interesting schemata, from those who regard the movement as a passing fad or an aberration of a holistic view of man. Those who accept Competency are at least temporarily committed to seeking precise, explicit ways to describe human behavior. Those who reject Competency in favor of English prefer aesthetic prose to describe human behavior and allow variation in interpretation.

2. Communicative Function. When Competency serves a communication function it reduces or eliminates communication failure. Practitioners in this function are seeking inter- and intra-personal reliability in describing human behavior phenomena. Agreement is reached on word meanings and interest is directed toward a consistent expansion and organization of vocabulary. This is the most frequently used function, but because of the language's novelty, fluency varies and risk of massive communication failure is inherent.

3. Suggestive Function. Persons actively involved in CBTE readily attribute instructional innovations to the specification of instructional goals in Competency. The clarity of the language reveals discontinuity between educational goals and instructional procedures. Without practical limitations on new methodologies or unusual learning experiences, goals expressed in Competency readily suggest innovative experiences and methodologies organically related to the goals. This Competency-induced serendipity in teaching has been tempered by administrative, fiscal, and temporal concerns, nevertheless, Competency in the suggestive function has produced major and minor instructional developments.

4. Investigative Function. Educational researchers have long been using a variation of Competency in the investigative function. Their research hypotheses (a Competency dialect) provide for a series of observable independent and dependent variables such as IQ, achievement, attitude, and age. Educational philosophers also investigate, but generally Competency has not been part of their analytical language repertoire. Instead, they have relied heavily on the descriptive English language for investigation rather than the functional Competency language.

5. Generative Function. This function is the only one of the six that is not proposed on the basis of participant-observation experience within the behavioral objectives movement. It is a theoretical function which might some day become operational. On many occasions, one is tempted to identify a particular use of Competency as being the generative function, but it is probably better identified as the suggestive function. The difference between the suggestive and the generative is one of variation of thought versus advancement of thought. Once Competency has developed the universality and maturity of symbolic logic in

precise operations, then more individuals will pursue this function. For example, it is in this function that educational philosophers of most orientations might enjoy [illegible]ive and powerful philosophical speculation.

6. Valuative Function. All persons involved in CBTE have used Competency at one time or another in the valuative function. Discussions on the characteristics of a model teacher, on how to distinguish among various levels of teaching ability, and on competency-based professional certification involve Competency in this function. As it happens, most of the negative orientations toward CBTE originate in this function. For example, when a person makes a tentative commitment to Competency in the binary function he very quickly finds himself embroiled in a debate over model teacher characteristics or assessment procedures using Competency far above his level of fluency in the valuative function. Discouragement sets in and the individual rejects Competency, reverting back to the generalities of descriptive English which usually characterize such discussions.

Ordered Relationships among Functions

The order among the six functions as defined above is important. A hierarchy of levels of use sophistication is intended. For example, the binary function performs a relatively simple operation compared with the other five, especially the use sophistication expected in the valuative function. With an increase in the level of use sophistication there should also be a decrease in the numbers of individuals able to use Competency well. Unfortunately at present too many individuals are using Competency in the evaluative function, when its suggestive function might be more useful.

One expects a certain amount of fluency at lower levels before one attempts higher levels with rigour. Of course, this is not the way Competency is being used. Presently individuals use all functions indiscriminantly and unconsciously regardless of fluency. An individual tentatively accepting Competency quickly finds himself confronted by valuative function as described earlier. Without any experience at the intermediate levels he is likely to drop Competency in favor of the more comfortable English.

Frequently CBTE practitioners with experience in two or more of the intermediate functions are not willing to abandon the language even though discouraged by the challenges of the valuative function. They are sustained by the advances in teacher education made through the generative function to redirect teaching and teacher education practices.

A final characteristic of the order is the increasing difficulty of remaining within boundaries of a particular function, At higher levels there is a greater possibility of transcendency among functions. This sliding from one functional use of Competency to another is a hazard which causes communication noise and is particularly significant at the higher levels. The primary illustration of the transcendency phenomenon is the conversation of CBTE enthusiasts sharing program innovations and giving views on CBTE issues. Talk jumps spasmodically from significant to insignificant issues, from program failures to successes, and from objective to subjective observations.

The three characteristics found in the purposeful order of the six functions are: sophistication of use, fluency in Competency, and transcendency of definition. The characteristics constitute an organizing principle: selection of a particular function is determined by one's need for the language's sophistication level, fluency in Competency, and

sensitivity to definition frailty. When one is confronted by an organization pattern such as the one just proposed, it may be useful to consider possible relationships with the Taxonomy Project initiated in 1948, often referred to as the Bloom Taxonomy.[4]

The Taxonomy of Educational Objectives. Although the six functions were set down on paper originally without deliberate effort to match categories in the Cognitive and Affective Domains, parallels exist with the Taxonomies of Educational Objectives. Effort will not be made in this article to illustrate the parallels, but a review of Appendices A and B in the Taxonomy of Educational Objectives, Handbook II: Affective Domain will reveal striking similarities between the levels of objectives and the functions of Competency. More important, however, are the organizing principles proposed by the Taxonomy Project: complexity for the cognitive domain and internalization for the affective domain.

The principles of internalization and complexity appear in the six levels of Competency functions. For example, the complexity principle is essentially the level of use sophistication. Internalization may be associated with fluency in Competency and transcendency of definition. If internalization is an appropriate principle for determining function levels, then it is reasonably safe to assume that many people using Competency at its highest function are doing so on a superficial basis, without internalization. The likelihood of having internalized Competency to the extent that it is a pervasive outlook is remote.

Algebraic Model for Describing Relationships. It may be helpful for understanding the organization of the six Competency functions to use a simple algebraic model: the exponential equation

$$Y = X^3.$$

A small value for X corresponds with a large value for Y. As values for X become larger, the corresponding values for Y experience a much greater increase in size. For example:

If	X =	1	2	3	4	5	6
then	Y =	1	8	27	64	125	216
with a difference		0	6	24	60	120	210

This algebraic model is applied by regarding the six functions as variations in X. Y may be defined as either sophistication of use, fluency in Competency, or transcendency of definition, and possibly as complexity and internalization. Other useful meanings for Y might include variables such as extent of professional responsibility, job sophistication level, and preparation or educational background.

The point of the algebraic model is that movement from a lower function of Competency to a higher function of Competency, corresponds to a dramatic increase in sophistication, fluency, transcendency, complexity, and internalization. Consequently, discussions in Competency require great caution and respect for the language functions, especially when using Competency in the higher functions.

Conclusion

The basis being proposed for a re-evaluation of the behavioral objectives movement is the Competency language. The language must be explored carefully and understood by those using it. Without advancement in the language beyond where it now is for most people, issues such as the holistic view of man, the affective dimension of professional preparation, competency-based certification, and the model teacher are premature.

Present disillusionment with CBTE focuses on irreconcilable issues. It is proposed that these issues arise from miscommunication and not necessarily from contradictory assumptions. The communication issue was

explored in terms of communication theory with characteristics of the new language being suggested. At present, these characteristics constitute the six ordered functions of the language. Therefore, unless the functions and their ordered relationships are understood and respected, massive communication failure due to external and internal psychologic factors is bound to develop.

Competency can be a productive instrument for thought and practical application as many CBTE practitioners have experienced and sensed. A pause is needed now in the behavioral objectives movement to explore the language and to help CBTE and its concomitants achieve full potential.

Bibliography

Bloom, Benjamin S. (ed.). Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay, 1956.

Broudy, Harry S. A Critique of Performance-Based Teacher Education. Washington: American Association of Colleges for Teacher Education, 1972.

Combs, Arthur W. Educational Accountability: Beyond Behavioral Objectives. Washington: Association for Supervision and Curriculum Development, 1972.

Gordon, George N. The Language of Communication: A Logical and Psychological Examination. New York: Hastings, 1969.

Krathwohl, David R., Benjamin S. Bloom, and Bertram B. Masia. Taxonomy of Educational Objectives, Handbook II: Affective Domain. New York: David McKay, 1956.

Leight, Robert L. (ed.). Philosophers Speak on Accountability in Education. Danville, Illinois: Interstate, 1973.

Smith, Alfred G. Communication and Culture: Readings in the Codes of Human Interaction. New York: Holt, Rinehart and Winston, 1966.

References

1. Harry S. Broudy. A Critique of Performance-Based Teacher Education. Washington: American Association of Colleges for Teacher Education, 1972, Arthur W. Combs. Educational Accountability: Beyond Behavioral Objectives. Washington: Associate for Supervision and Curriculum Development, 1972, and Robert L. Leight. (ed.). Philosophers Speak on Accountability in Education. Danville, Illinois: Interstate, 1973.

2. George N. Gordon. The Language of Communication: A Logical and Psychological Examination. New York: Hastings, 1969, p. 23.

3. Ibid., p. 26.

4. Benjamin S. Bloom. (ed.). Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay, 1956.

Appendix A

Propositions for Discussion

There are many problems which face CBTE program leaders. The article's Competency-as-language hypothesis may provide a potential tool for exploring the problems. The propositions or working hypotheses in this Appendix are presented for practice in applying and extending the Competency-as-language hypothesis, and should not be regarded as necessarily valid deductions from the hypothesis. Please note that the indented statements are corollaries or parallel propositions related to the propositions immediately preceding them.

1. The teacher does not accept direct responsibility for affective goals because these goals are difficult to translate into Competency (specific behaviors) statements.

    2. The teacher is willing to accept responsibility for cognitive and psychomotor development goals because these goals are available in Competency statements.

3. In current practice, Competency in the valuative function is more frequently employed than Competency in the communicative function when dealing with the affective behaviors of teachers.

    4. Discussion about affective behaviors in the valuative function of Competency are likely to result in an ideological impasse.

5. Persons able to use fluently the valuative function of Competency are the only ones who should judge evidence presented on whether or not a goal has been achieved.

    6. Fluency in the valuative function is necessary in order to certify that an individual possesses certain abilities.

7. Using a particular function of Competency, the level of fluency required in that function varies, whether cognitive or affective goals are being considered.

8. The exploration of affective goals has been slow because of inadequate fluency in the communicative function of Competency for considering these goals.

9. The communicative and suggestive functions of Competency are not sufficient to present the major responsibilities of a teacher.

10. The valuative function of Competency must be used at one time or another in a CBTE program.

11. A person's ability to use a function in Competency should be related to that person's level of responsibility in a program.

12. A professional teacher should be able to use Competency in the higher functions, whereas the paraprofessional need only be concerned with the binary and communicative functions of Competency.

Appendix B

Further Exploration

Following are suggestions for refining and applying the Competency-as-language hypothesis in teacher education and professional use.

1. In group discussion, examine past experiences in developing and describing CBTE programs in light of the hypothesis and communication theories.
2. Refine further, add to, and delete from the six functions of Competency presented in this paper. This effort includes the development of clearly stated upper and lower limits for each function level in Competency.
3. Transformation analysis should be applied to a corpus of Competency statements in an effort to establish sentence patterns, to discover inherent grammatical laws, and to suggest a "universal" sentence structure or structures for the Competency language.
4. Steps should be taken to develop a finite Competency vocabulary, including verb operators for affective, cognitive, and psychomotor behavior descriptions.